EXECUTIVE SUMMARY

ADVANCED DRIVER ASSISTANCE SYSTEMS (ADAS) MODULE

GLOBAL EPICENTER OF MOBILITY
REVOLUTIONIZING THE DETROIT REGION

Detroit Regional Partnership

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IN THIS SUMMARY

The Global Epicenter of Mobility (GEM), a signature program of the Detroit Regional Partnership (DRP), is designed to enable growth and development of the advanced mobility industry in the 11-county Detroit Region. GEM and its strategic partners work together to create a smart, secure, and sustainable advanced mobility industry in Southeast Michigan. GEM's efforts were made possible by a four-year U.S. Economic Development Administration (EDA) Build Back Better Regional Challenge grant award.

As part of its work, GEM provides its grant partners and regional stakeholders with key mobility sector research, data, and insights, with the Road to 2030 website serving as a key dissemination and engagement tool. The ADAS Module is unique among the Road to 2030 modules, as its primary source is the North American ADAS Market Study completed by Wipfli in 2026.

The Road to 2030 is the main resource that GEM and DRP use for sharing mobility insights.

ADVANCED DRIVER ASSISTANCE SYSTEMS (ADAS) INTRODUCTION

Advanced Driver Assistance Systems (ADAS) represent the critical bridge between today's vehicles and the fully autonomous, software-defined mobility systems of the future. Combining sensors, AI-driven perception software, sensor fusion, and over-the-air connectivity, ADAS technologies are rapidly becoming foundational to safety, performance, and user experience across transportation modes. The Detroit Region is uniquely positioned to lead this transformation, anchored by the world's densest automotive engineering ecosystem—including major global automakers and suppliers—alongside extensive R&D, calibration, and testing capabilities supported by premier facilities at regional universities and other nonprofit entities.

KEY TAKEAWAYS

ADAS integrates a network of perception sensors—including cameras, radar, ultrasonic, SONAR, thermal imaging, and LiDAR—to continuously monitor the vehicle's surroundings and detect lanes, obstacles, pedestrians, and other hazards. These sensors feed data into Electronic Control Units (ECUs) and Central Compute Units (CCUs), which process information in real time to support both passive functions, such as driver alerts and warnings, and active functions, including automated braking, steering, adaptive cruise control, and parking assistance. The Human-Machine Interface (HMI) ensures effective communication between the vehicle and driver through visual and audible feedback. Together, these components form a cohesive system that enhances driver awareness, improves vehicle safety, and enables increasing levels of vehicle automation.

Figure 1:

KEY ADAS COMPONENTS

SOURCE: MICHIGAN TECH RESEARCH INSTITUTE; WIPFLI ADAS MARKET STUDY, 2026.


MULTI-PURPOSE CAMERA


THERMAL CAMERA

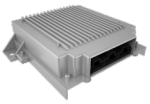

FRONT RADAR SENSOR


LiDAR


NEAR-RANGE CAMERA

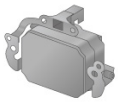

SONAR


ULTRASONIC SENSOR


ADAS ECUs (ELECTRONIC CONTROL UNIT)


CORNER RADAR SENSOR


CENTRAL COMPUTE UNIT (CCU)


RADAR


HUMAN-MACHINE INTERFACE (HMI)

Figure 2:

ADAS DIAGRAM

SOURCE: MICHIGAN TECH RESEARCH INSTITUTE

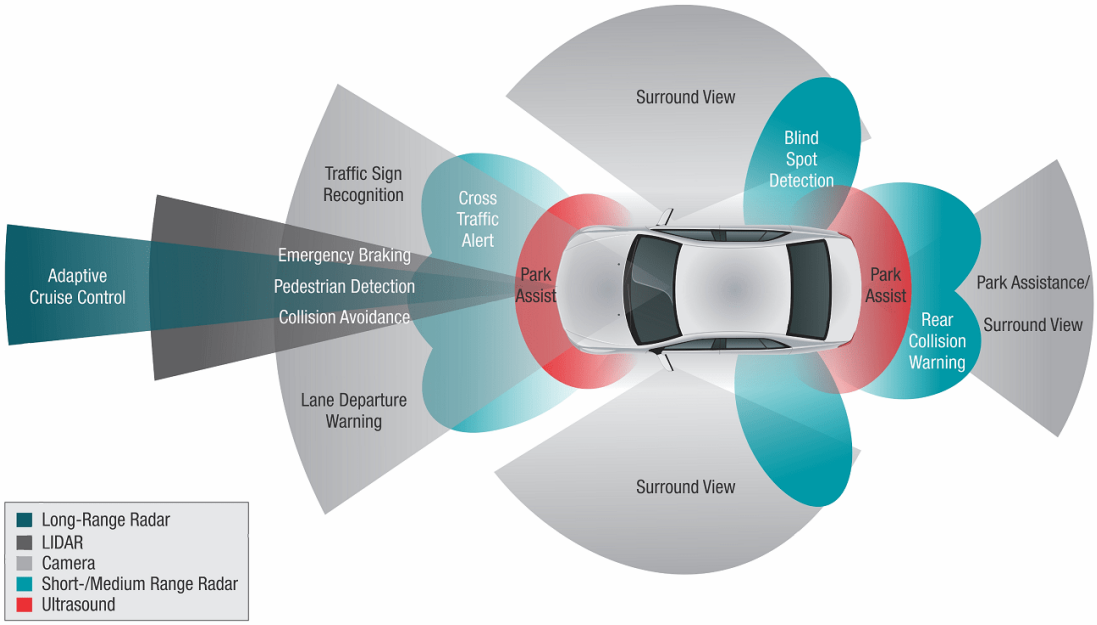
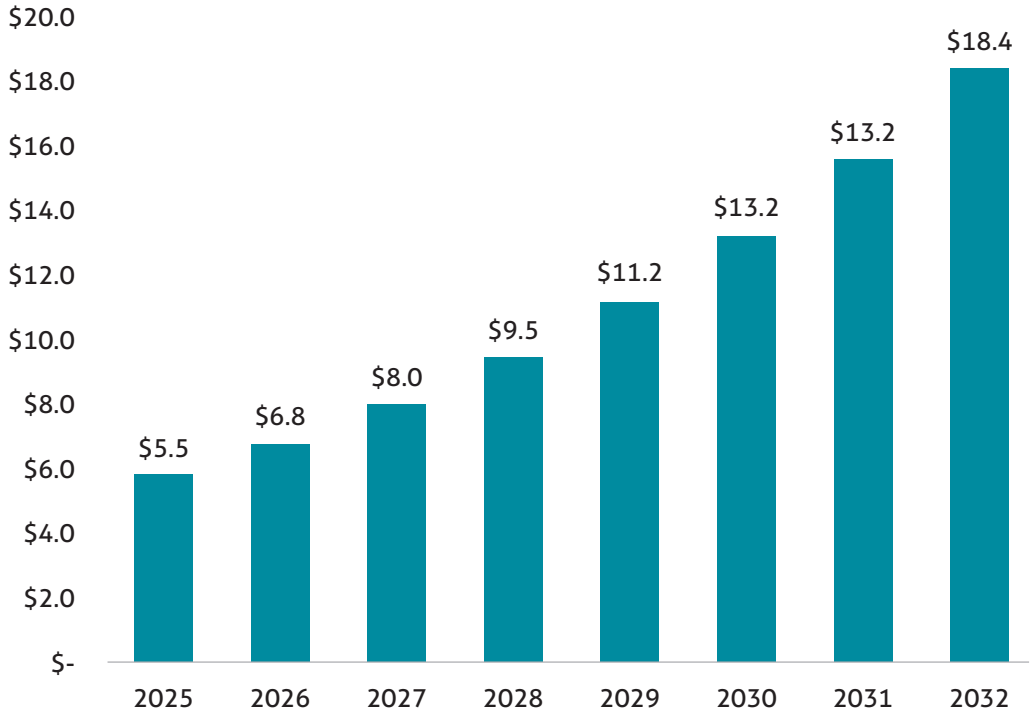


Chart 1:

GLOBAL ADAS MARKET SIZE

SOURCE: WIPFLI ANALYSIS, MARKETS AND MARKETS



The global ADAS software market is projected to more than triple between 2025 and 2032. Growth is driven by sensor fusion, perception, mapping, AI decision-making, cloud simulation, cybersecurity, and OTA updates.

Automotive AI is expanding rapidly (15.3% Compound Annual Growth Rate (CAGR) to $38.5B by 2030), with many OEMs partnering externally. Safety mandates and technology breakthroughs are accelerating adoption, and 89% of automotive organizations rank ADAS software as a top priority.

Chart 2:

ADAS GROWTH FORECAST - GLOBAL

SOURCE: WIPFLI ANALYSIS, MARKETS AND MARKETS

Application	2025 Market Size ($ Bn)	2030 Forecast Market Size ($ Bn)	Global CAGR (2025-2030)
Adaptive Cruise Control	$33.5	$73.9	7.5%
Tire Pressure Monitoring System	$7.1	$10.5	8.1%
Blind Spot Detection	$3.2	$6.2	14%
Automated Park Assist System	$2.9	$5.9	15%
Lane Departure Warning System	$6.9	$14.9	16.6%
Automated Emergency Braking	$74	$106	7.3%
Automotive Intelligent Lighting	$8.2	$12.2	8.9%

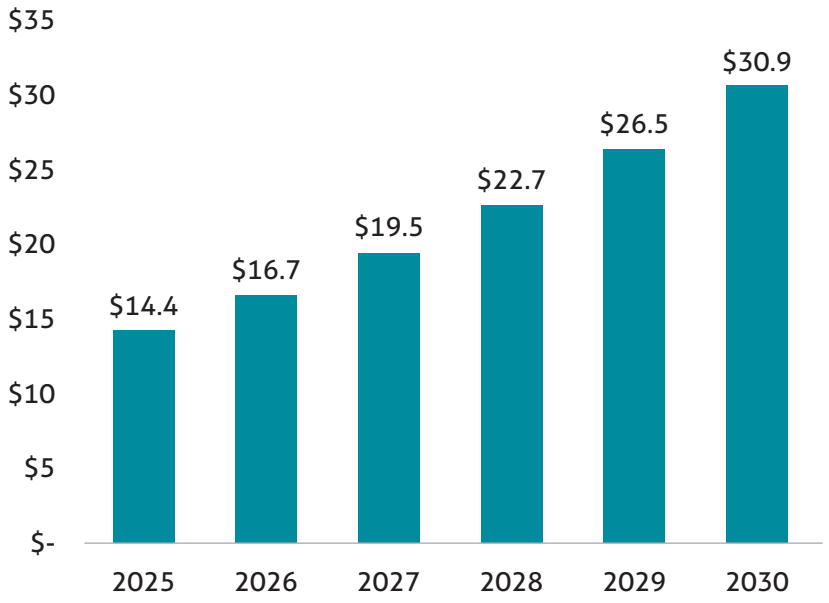
Lane departure warning systems are the ADAS technology with the highest forecast growth between 2025 and 2030, with a Compound Annual Growth Rate (CAGR) of 16.6%.

Automated parking assist systems, with a CAGR of 15%, and blind spot detection systems, with a CAGR of 14%, are forecast to grow nearly as rapidly.

Chart 3:

ADAS MARKET SIZE – NORTH AMERICA

SOURCE: WIPFLI ANALYSIS, AUTOFORECASTSOLUTIONS (AFS), GRANDVIEW RESEARCH, FORTUNE BUSINESS INSIGHTS, CREDENCE RESEARCH



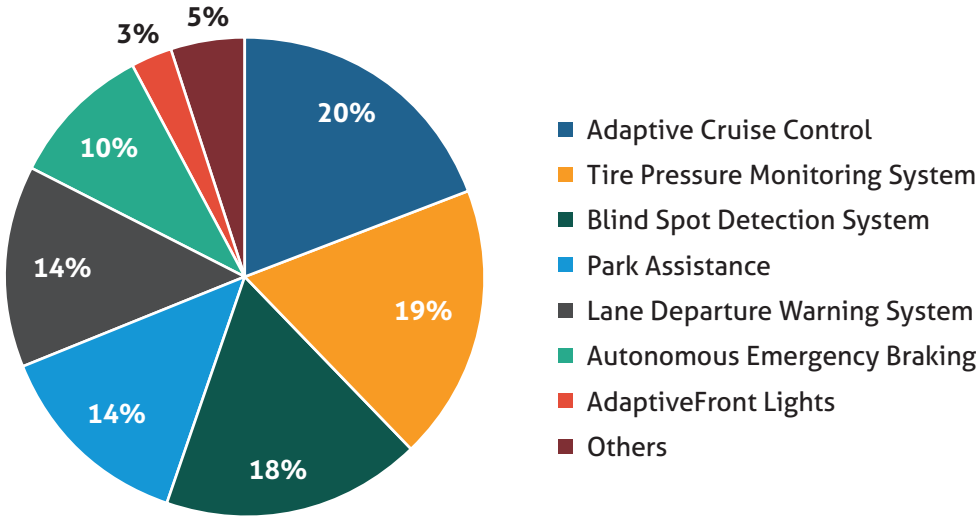
The North American ADAS market is growing rapidly, driven largely by strict safety regulations. A major near-term catalyst is NHTSA's rule requiring automatic emergency braking on all light vehicles by 2029.

The United States leads the North American region due to the presence of global OEMs and advanced technology adoption, accounting for 69% of the North American market.

Chart 4:

2024 U.S. ADAS MARKET BY APPLICATION

SOURCE: WIPFLI ANALYSIS
SOURCE: MARKET RESEARCH FUTURE, MORDOR INTELLIGENCE



Adaptive cruise control (20%), tire pressure monitoring systems (19%), and blind spot detection systems (18%) are the dominant ADAS applications in the U.S. market.

In 2024, these technologies comprised 57% of the U.S. ADAS market. Parking assistance systems, at 14%, are the next-highest share application.

Chart 5:

ADAS GROWTH BY MOBILITY SECTOR

SOURCE: WIPFLI ANALYSIS, AUTOFORECASTSOLUTIONS (AFS), GRANDVIEW RESEARCH, FORTUNE BUSINESS INSIGHTS, CREDENCE RESEARCH

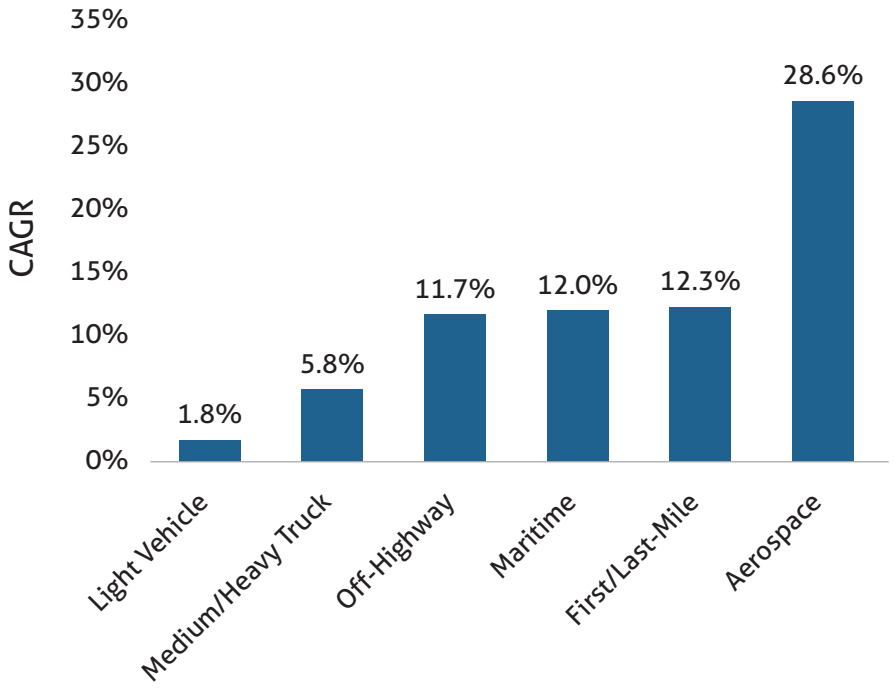
GROWTH BY MOBILITY SECTOR		
2025 Market Volume (Units)	**2032 Market Volume (Units)**	**Most Adopted Application**
Light Vehicle		
8,522,716	9,634,618	AEB, FCW, BSD, LDW
Medium/Heavy Truck		
205,500	304,480	AEB, FCW, BSD, LDW
Off-Highway		
104,275	226,627	AEB, BSD, RCW
Maritime		
56	124	Collision Avoidance
Aerospace		
71	412	Collision Avoidance
First/Last-Mile Delivery		
290	652	AEB, FCW, BSD

While light vehicle applications of ADAS technologies are expected to dominate through 2032, other mobility sectors are forecast to experience higher growth rates. Despite lower volumes, Aerospace and Off-Highway applications are forecast to experience CAGR levels of 28.6% and 11.7%, respectively. The ADAS technologies most adopted across these mobility sectors include automatic emergency braking, forward collision warning, blind spot detection, lane departure warning, and collision avoidance.

Chart 6:

U.S. MOBILITY SECTOR GROWTH RATES

SOURCE: WIPFLI ANALYSIS, AUTOFORECASTSOLUTIONS (AFS), GRANDVIEW RESEARCH, FORTUNE BUSINESS INSIGHTS, CREDENCE RESEARCH



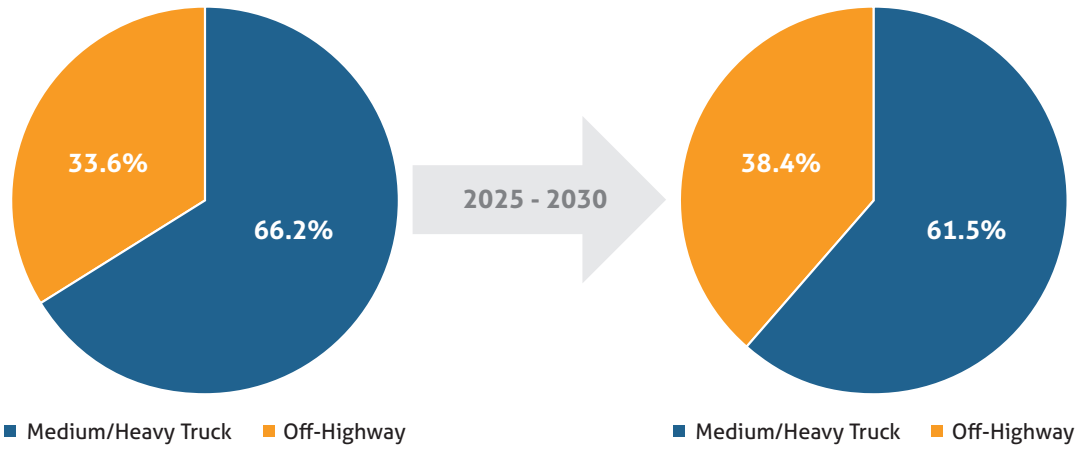
The U.S. mobility sector is projected to see its fastest growth in adjacent and emerging segments, led by aerospace (28.6% CAGR), followed by first/last mile, maritime, and off-highway vehicles, while traditional light vehicle growth remains modest at 1.8%.

The Detroit Region is uniquely positioned to lead this transition, leveraging decades of automotive expertise in engineering, manufacturing, and supply chain integration to expand into high-growth sectors such as aerospace, defense, maritime, and autonomous systems.

Chart 7:

U.S. NON-LIGHT VEHICLE ADAS GROWTH

SOURCE: DRP AUTOMOTIVE INDUSTRY CLUSTER DASHBOARD

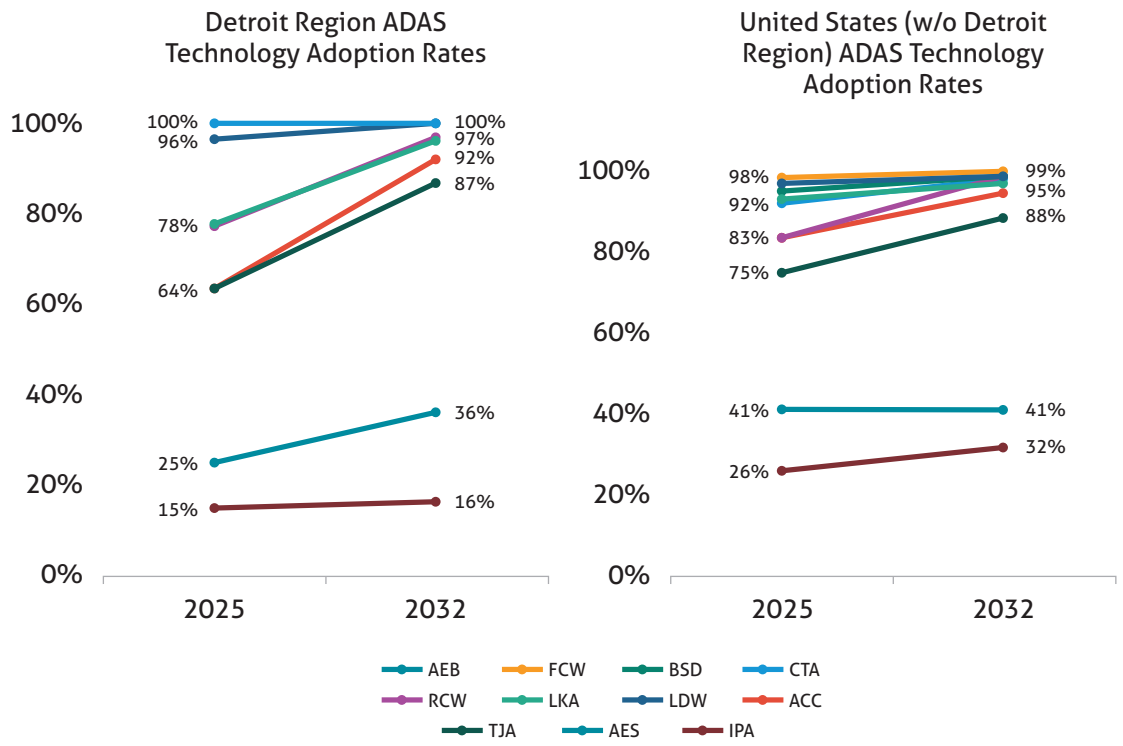


The Medium/Heavy Truck and Off-Highway sectors dominate U.S. ADAS applications in the non-light vehicle mobility sectors, with a combined share of 99.8% in 2025 and 99.9% in 2030. Off-Highway applications are forecast to increase from 33.6% in 2025 to 38.4% in 2030, resulting in Off-Highway applications accounting for 61.5% of U.S. non-light vehicle ADAS applications in 2030.

Chart 8:

DETROIT REGION/U.S. ADAS ADOPTION RATE COMPARISON

SOURCE: NORTH AMERICA ADAS MARKET STUDY, WIPFLI



The Detroit Region's automakers lead the United States in adoption rates of critical ADAS technologies, including automatic emergency braking, forward collision warning, blind spot detection, and cross traffic alert. This trend is driven by the higher content, increased complexity, and segment profile of the vehicles built in the Detroit Region.

While all of these applications are forecast to experience significant growth through 2032, adaptive cruise control and traffic jam assist systems are expected to experience the most-rapid growth in Detroit Region-produced vehicle applications.

[KEY TAKEAWAYS CONTINUE ON THE NEXT PAGE]

Chart 9:

DETROIT REGION ADAS GROWTH OPPORTUNITIES

SOURCE: WIPFLI ADAS MARKET STUDY, 2026

The Detroit Region is home to the world's densest automotive engineering ecosystem, anchored by multiple automakers and major global suppliers such as DENSO, ZF, Bosch, Lear, Continental, and Magna. The region also boasts extensive ADAS research, development, calibration, and software capabilities, along with the nation's leading autonomous vehicle testing and proving infrastructure. Beyond automotive, Detroit maintains strong strategic alignment with defense mobility, advanced aerial mobility initiatives, Great Lakes maritime activity, and off-road and industrial automation sectors.

This deep supplier base provides a cross-sector advantage, enabling companies to repurpose automotive ADAS and autonomy capabilities for use in drones and eVTOL aircraft, off-highway, construction and mining equipment, maritime autonomy, warehouse and logistics robotics, and defense unmanned systems. Together, these assets position the Detroit Region not merely as an automotive center, but as a comprehensive, multi-modal hub for autonomy and advanced mobility innovation.

Detroit is strategically positioned to lead in ADAS technologies across both automotive and adjacent mobility industries, particularly as the shift from hardware-centric vehicles to software-defined mobility creates long-term economic development opportunities. Federal safety mandates are expected to accelerate near-term investment in ADAS, while cross-sector convergence—including aerospace, maritime, and off-highway applications—broadens the region's ability to attract companies beyond traditional automotive.

Key high-growth opportunities for regional business development include AI and perception software, sensor fusion and testing, drone and unmanned aerial systems (UAS) manufacturing and operations, off-highway automation, maritime autonomy R&D, and cybersecurity and over-the-air infrastructure.

DETROIT REGION ADAS INVESTMENT HIGHLIGHTS

The Detroit Region features a vast breadth of ADAS-related investments from automakers, suppliers, and nonprofit entities. Two examples are highlighted below.

IMAGE SOURCE: MICHIGAN ENGINEERING

UNIVERSITY OF MICHIGAN AUTOMOTIVE RESEARCH CENTER (ARC)

The Automotive Research Center (ARC) at the University of Michigan engages in advanced mobility research. Among other initiatives, ARC serves as the U.S. Army's Center of Excellence for modeling and simulation of ground vehicle systems – serving as a key example of collaboration between the Detroit Region's mobility entities and the Defense sector. Since its founding in 1994, ARC's multidisciplinary team—comprising faculty, students, and partners from over a dozen universities, industry, and government agencies—has developed tools and technologies to inform the design, control, and performance of next-generation vehicle systems, with a growing emphasis on autonomous and connected systems that can operate in complex, off-road environments. ARC's work spans high-fidelity digital simulation, virtual vehicle prototypes, human-autonomy teaming, and systems integration, enabling the Army to explore advanced autonomy and software-intensive platforms more efficiently and safely than through traditional field testing alone.

Through initiatives such as digital twin environments and integrated AI-driven control frameworks, ARC continues to bridge fundamental research and mission-ready systems while educating the next generation of engineers and strengthening ties across government, academia, and industry.

GENERAL MOTORS/NVIDIA ADAS COLLABORATION

Over the past few years, General Motors (GM) has been one of the most prominent automakers advancing ADAS and autonomy work, particularly through strategic shifts and high-profile collaborations. GM has expanded and refined its Super Cruise system, realigning its autonomy strategy by winding down separate robotaxi development and consolidating efforts around ADAS and personal vehicle autonomy.

A major component of GM's recent investment has been its expanded collaboration with Nvidia, announced in 2025, to leverage Nvidia's AI computing platforms both for vehicle development and next-generation advanced driver assistance systems. This deepened relationship underscores the key role played by myriad suppliers, many from outside traditional automotive and mobility supply chains, in delivering ADAS technology to consumers.

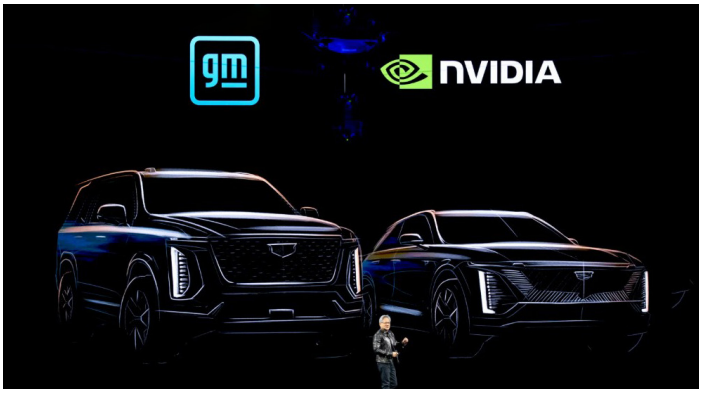


IMAGE SOURCE: GETTY IMAGES

CONCLUSION

The Detroit Region is poised to expand its leadership in ADAS as mobility systems become increasingly software-defined, connected, and autonomous. With its unparalleled concentration of engineering talent, global suppliers, advanced testing infrastructure, and cross-sector partnerships, the region has the foundation to accelerate innovation well beyond traditional automotive applications. As regulatory momentum drives broader ADAS adoption and technologies such as AI-driven perception, sensor fusion, cybersecurity, and over-the-air platforms mature, Detroit can leverage its ecosystem to scale solutions across aerospace, maritime, defense, robotics, and industrial automation. By building on its historic strengths while embracing multi-modal convergence, the Detroit Region has the potential not only to lead the next phase of ADAS deployment, but to shape the global future of advanced, autonomous mobility.

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